

## **IN THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

1-9 (Canceled)

10. (Currently Amended) In a transfer device usable in a system for intraluminal treatment of a selected site in a body of a patient by a source train of treating elements ~~at least one treating element~~ advanced through a lumen in the transfer device into a lumen of a separate catheter by means of pressurized fluid, the transfer device and catheter defining a fluid path for pressurized fluid, the transfer device being adapted to receive a fluid cartridge for holding the fluid and a source cartridge for storing the source train of treating elements, a system for preventing operation of the transfer device unless each of the catheter, fluid cartridge and source cartridge are attached thereto and a system for determining if one or more of the treating elements is missing from the source cartridge in the transfer device,

said systems comprising at least one microprocessor;

said system for preventing operation of the transfer device comprising:

an illumination source and optical sensor located in the transfer device in proximity to where each of the catheter, fluid cartridge and source cartridge is received by the transfer device, each illumination source being located with respect to its optical sensor so that the optical sensor is able to receive light from its illumination source only if the catheter, fluid cartridge or source cartridge is not received by the transfer device, and the optical sensor being

blocked from receiving light from the illumination source when the catheter, fluid cartridge or source cartridge are received by the transfer device;

[[a]] the at least one microprocessor for controlling the movement of the treating element from the transfer device to the catheter, the microprocessor preventing operation of the transfer device upon receiving a signal from any of the optical sensors indicating that at least one of the catheter, fluid cartridge and source cartridge is not attached to the transfer device; and

a graphical user interface controlled by the microprocessor for visually indicating which of one or more of the catheter, fluid cartridge and source cartridge is not attached to the catheter when operation of the transfer device is prevented;

said system for determining if one or more of the treating elements is missing from the source cartridge in the transfer device comprising:

a light source including a jacketed fiber optic bundle disposed on a first side of the source cartridge to produce a plane of light, a first slot disposed in the first side of the source cartridge, wherein said plane of light is directed towards said first slot;

a linear array of photosensors disposed on a second side of the source cartridge, a second slot disposed in the second side of source cartridge, wherein said photosensors measure light from the light source that travels through said second slot;

the at least one microprocessor for comparing the amount of light measured by the photosensors to a reference amount corresponding to the amount of light measured by the photosensors when one or more of the treating elements is not within the storage cartridge,

wherein the plane of light shines through the first slot, the storage cartridge and the second slot and is received by the photosensors when one or more of the treating elements is not within the source cartridge, and

wherein if some treating elements are within the source cartridge but one or more of the treating elements is missing from the source cartridge, a portion of the plane of light will shine through the first slot, the source cartridge and the second slot and be received by the photosensors, the microprocessor then being able to determine based on the amount of light received by the photosensors that one or more of the treating elements is missing.

11-19 (Canceled)

20. (Currently amended) In a transfer device usable in a system for intraluminal treatment of a selected site in a body of a patient by at least one treating element advanced from a translucent storage sleeve having a lumen into a lumen of a separate catheter by means of pressurized fluid, a system for detecting the presence or absence of one or more of the treating elements in the translucent storage sleeve comprising;

a light source including a jacketed fiber optic bundle disposed on a first side of the storage sleeve to produce a plane of light that intersects at least a portion of the storage sleeve lumen, a first slot disposed in the first side of the storage sleeve;

a linear array of photosensors disposed on a second side of the storage sleeve so as to measure light from the light source, a second slot disposed in the second side of the storage sleeve;

a microprocessor for comparing the amount of light measured by the photosensors to a reference amount corresponding to the amount of light measured by the photosensors when the treating element is not within the lumen of the storage sleeve,

wherein the plane of light shines through the first slot, the storage sleeve and the second slot and is received by the photosensors when ~~[[the]]~~ one or more of the treating elements is not within the lumen of the storage sleeve, and

wherein if some treating elements are within the lumen of the storage sleeve but one or more of the treating elements is missing from the sleeve, a portion of the plane of light will shine through the first slot, the storage sleeve and the second slot and be received by the photosensors, the microprocessor then being able to determine based on the amount of light received by the photosensors that one or more of the treating elements is missing.

21. (Original) The transfer device of Claim 20 wherein the light source comprises an infrared light source.

22. (Original) The transfer device of Claim 20 wherein the light source comprises a laser diode.

23. (Canceled)